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AUTHOR Epstein, Joyce L.
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INSTITUTION Johns Hopkins Univ., Baltimore, Md. Center for Social Organization of Schools.
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ABSTRACT

Homework is one of the most important practices for establishing a successful academic environment. From the literature and an elementary school teacher survey, seven purposes of homework were identified: practice, participation, personal development, parent-child relations, policy, public relations, and punishment. Using data from elementary school teachers, principals, parents and students from a survey in 16 Maryland school districts (Becker and Epstein, 1982), this paper explores the correlates of homework activities and student behaviors in school. Six homework variables are correlated with reading and math achievements, homework performance, and classroom behavior: homework time, homework quality, student attitudes, teacher practices, parent abilities and resources, and other student and family factors. Results indicate that simple association of homework time and student achievement is not enough to understand when homework is important for effective teaching and learning. It is not clear that increasing homework time improves or maintains the achievement, homework behaviors, or school attitudes of low achievers. (BS)

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HOMEWORK PRACTICES, ACHIEVEMENTS, AND BEHAVIORS OF ELEMENTARY SCHOOL STUDENTS

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Joyce L. Epstein

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Center for Social Organization of Schools
The Johns Hopkins University
3505 North Charles Street
Baltimore, MD 21218

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Homework Practices, Achievements and Behaviors of Elementary School Students.

Homework has been labeled one of the most important practices for establishing a successful academic environment in high school. Coleman, Hoffer, and Kilgore, 1981, concluded that homework and discipline were the two features of private schools that made them more successful learning environments than public schools. The implication is that if public schools assigned more homework, their students would learn more, and the schools would be more effective. This prescription may be too simple. Homework policies of private schools may be geared to their self-selected populations students who differ from the general population of students in public high schools. Thus, private school students may receive the same amount of homework as public school students in college preparatory programs, but more homework than public school students in general or commercial programs. The notion that more-is-better may not be true for all students, in all subjects, at all skill levels, at all educational levels. Indeed, if more homework is assigned than can be completed, or if inappropriate homework is assigned, then home assignments may be counterproductive for student achievement.

Other researchers have examined the importance of homework. Rutter, Maughan, Mortimore, and Ouston, 1979, included three items about homework in their report on secondary school effects. They reported that the assignment of homework by teachers and the doing of homework by students were positively associated with student academic performance and school behavior. They found that schools in which teachers gave fre-

quent and large homework assignments had better student outcomes than did schools in which teachers assigned little homework. Their cross-sectional data was reported only as zero-order correlations, and could mean that schools with good, hard-working students had diligent teachers who assigned more homework more often. Similarly, a National Assessment of Educational Progress (NAEP) study of students' mathematics skills showed that among 10,000 seventeen year olds, good students did about 10 hours of homework and watched about 5 hours of TV a week. Poor students often received no homework, and varied in the amount of TV they watched (Yeary, 1978).

Keith, 1982, conducted what may be the best study study available on the effects of homework on the achievement of secondary school students. Using data collected in the High School and Beyond (HSB) study he found a modest but impressive positive effect of homework on high school grades (path coefficient = .192). Race, family background, ability, and school program (track) were statisitically controlled, providing a rigorous analysis of cross-sectional data. He also showed an interesting linear relationship between hours of homework per week and school grades for students at three ability levels. Low-ability students who did 10 hours of homework or more per week had as good grades as high ability students who did no homework. Keith's findings suggest that students' personal commitment to school and homework can have positive consequences of greater success in school for students at all levels of ability.

Most research on the effects of homework has been conducted at the secondary school level. It is especially important to examine the effects of homework policies and practices at the elementary school level because the experiences of young students can largely determine the group or track they enter in the secondary schools. Homework would be a very important practice if it were shown to help more elementary students attain grade-level skills needed for success in junior high school.

The few empirical studies of homework leave many questions unanswered. The extant studies yield mixed results, with some showing positive results from homework, others showing no results, and most based on inadequate research designs and data (Austin, 1978; Gray and Allison, 1971). Little is known about why or how homework is associated with better achievement, behavior, attendance or attitudes. We need to understand why homework is assigned, whether it is appropriate in quantity and quality, and how it is structured to fit into teaching and reteaching skills in the classroom. It is important to determine if there are measurable effects on students, net of student ability, of homework time, habits, completion, and assistance or support from parents and peers. At the elementary level, parent involvement is an important topic that relates to homework activities. We need to know whether the assistance students receive from parents actually helps the students who need the most help, and whether and how homework time and parent involvement affects the parent-child relationship.

Purposes of Homework: Minding the P's and Cues

From the extant literature and from comments received from teachers in a survey of elementary school teachers practices of parent involvment (Epstein and Becker, 1982) we have identified seven separate purposes of homework:

> Practice (to increase speed, mastery, or maintenance of skills);
>
> Participation (to increase the involvement of each student with the learning task);
>
> Personal development (to build student responsibility, honesty, perseverence, time management, self confidence);
>
> Parent-child relations (to establish communication between parent and child on the importance of schoolwork and learning);
>
> Policy (to fulfill directives from administrators at the district or school level for a prescribed amount of homework per week);
>
> Public relations (to inform parents about what is happening in class); or
>
> Punishment (to remind students of the teacher's requirements for class work or behavior).

Each purpose may be important, though most teachers say that the main reason they assign homework is to give students time to practice skills learned in class (Becker and Epstein, 1982).

Homework for practice. Homework is time to practice skills, increase the ease with which skills can be used, and increase the students understanding of how and when to use the skills. Garner, 1978, studied 400 fifth, eighth, and tenth grade students. He measured both class time and homework time on specific subjects to establish exposure or total

time in and out of school allocated to specific subjects. He found greater variation in homework than in class time for math and language arts. For example, almost one third of the fifth grade students in his sample had about 8 more hours more total exposure to language arts skills and activities than the rest of the students -- more than one extra day per week for learning and using language arts. Older students received more homework than did younger students. At the 10th grade level, one-half hour of homework in math extended class time by 75% for more math learning. Even at the fifth grade level, 25 minutes of math homework added half again the time of a typical math class period for learning, reviewing, or practicing math. In his study, high-ability students were given more homework and class time, especially at the high school level. Garner's findings point to the potential value of well-planned use of homework time to extend learning time to give time to practice skills.

Homework for participation. Homework increases individual participation in lessons. In many classrooms, a few children participate frequently, and "carry the class" along while other children passively absorb information. By contrast, homework requires that each student participates actively and continually by reading, thinking, and recording ideas and answers on paper, and by making decisions about the completion of work. Homework is a structured opportunity for students to take control over learning and thinking. At home, students control the amount of time it takes to learn something, the number of consultations with others --including parents and peers -- to make discoveries or to receive support for academic work. They make self-assessments on the

quality of their work and can compare their self assessment with their teachers' marks or checks on homework completed.

Homework for personal development. Some teachers assign homework to help students take responsibility for school work, to record the assignment, create a schedule to do the work, finish it and store it in their notebook, and bring it to school when it is due. They seek to build "study skills" through homework assignments to develop students' perseverence, ability to follow directions, neatness and completeness, and overall level of responsibility.

Homework as public relations: Homework is sometimes assigned to fulfill public expectations, to to inform parents of work conducted at school, or to show parents how their children write, think, and execute an assignment. The illustrative purpose of homework is sometimes selected by teachers so that parents will not be surprised by children's report card grades that reflect the quality of their classwork. The idea is that whether or not the children improve, and whether or not the parents help, the school must provide information about the level and quality of the child's work to supplement the infrequent messages contained in report card grades.

Homework for parent-child interaction. Sometimes homework is the only form of serious communication about school and learning between parents and school-aged children. Children often need help in following directions, remembering and interpreting what was learned in school, relearning information that was misunderstood or incompletely learned, and deciding whether their approach and presentation will be acceptable

to the teacher. Homework provides a reason for parents to exchange information, facts, and attitudes about school. Maertens and Johnston (1972) found that students who had homework assignments and who received immediate or delayed feedback from parents had better mastery of math skills than students who received no homework.

There are important questions about the underlying purposes of parent involvement in learning activities at home. For example, do teachers ask for parental help in order to be responsive to the students' needs or in order to more certainly "share the blame" for the student's low achievement? Do the parents who are told how to help at home have children who make greater improvement in achievement than other parents who are asked to help at home, but not shown how to assist with learning activities?

Homework as school policy. Homework may be assigned to comply with district or school directives that a certain amount of homework be given to all students on certain number of days each week (McCutcheon, 1983). The recent emphasis on the definition that a "good school" is one that gives homework may influence schools to set a policy of assigning a certain amount of work in order to fulfill a requirement for being a good school.

Homework as punishment. Homework (I must not chew gum in school, or 500 words on appropriate behavior) may be assigned to punish students for lack of attention or for poor behavior. Punishing assignments exercise the teacher's power to use up time at home that would otherwise be under the student's control. The assignments often center on behavior

rather than academic skills, and stress embarrassment rather than mastery.

Not all outcomes will result from any homework. Thus, in research the outcome measured should relate to the purpose of the homework. For example, if the stated purpose of the homework is public relations, then the outcome measured should concern the understanding and attitudes of the parents; if the purpose is punishment, the outcome measure should be improved behavior; if the purpose is improved basic skills, the outcome should include a measure of the skills addressed to see if learning occured. If teachers, administrators, and parents define several purposes simultaneously, then multiple outcomes may be measured to determine whether all purposes are met. For some purposes, the content of the homework task may be less important than its design for the specific skill desired. Keshock, 1976, reported that when college science homework was graded and counted (vs. not counted) as part of the course grade, homework performance improved but test scores did not.

In a Los Angeles PUSH-EXCEL program, students were asked to work uninterrupted from 7 to 9 pm on home learning activities. This requirement improved homework behaviors, but reports were not available on whether achievement was improved (Yeary, 1978). So the acts of family structuring time and place, teacher checking and grading homework, and students doing the work were linked in different studies to starting, completing, and learning skills, respectively.

Using data from the International Association for the Evaluation of Educational Achievement (IEA), Wolf (1979) reported that homework time

was important for specific academic subjects. He reported significant correlations between homework in science and in literature and achievement in those subjects at the school and individual student levels. In regression analyses that accounted for family background and instructional program (track), variables were entered in blocks and so it is impossible to pinpoint the independent effects of homework (compared to other instructional variables) on achievement. The results show only that good students do more homework than poor students in science and literature. The important point from this research, however, is that homework in one subject may affect outcomes in that subject only, and may not have a general effect on achievement test scores or other student attitudes and behaviors. So it is important to know exactaly what homework is assigned and to measure results appropriately.

Data and Approach

In this study, information about homework was collected from each source involved in the homework process.

Data from teachers: Homework policies of the school and district; amount of homework assigned; subjects of homework; purpose of homework; attitudes and policies about parental help with or corrections of homework; policy of requiring parents to sign homework; estimates of students who complete homework; nominations of students who have problems with homework or who are homework "stars;" and use of class time to check or correct homework.

Data from principals: District and school policies; procedures to check teachers' homework assignments; and attitudes about whether parents should help with homework.

Data from parents: Amount of time child spends on homework; teachers' policies on parental help on homework; evaluation of appropriate level of difficulty of homework assigned to the child; child's understanding and completion of homework; and communications with the teacher about homework.

Data from students: Amount of homework assigned and completed; weekend homework; habits of doing homework; help at home on homework; parent's knowledge of homework assignments, problems and completion of homework; appropriate level of challenge in homework; attitudes about homework and written comments.

Surveys of teachers, principals, parents and students in 16 Maryland school districts were conducted in 1980 and 1981. About 3700 first, third, and fifth grade teachers and their principals in 600 schools were surveyed (Becker and Epstein, 1982; Epstein and Becker, 1982). From the original sample, 36 teachers were identified who strongly emphasized parent involvement in learning activities at home. These "case" teachers were selected at random from a stratified sample of leaders in parent involvement to represent the three grade levels; the urban, suburban, and rural districts; the socioeconomic conditions of the communities in the state; the teachers' education, experience, and teaching conditions. Then, 46 "control" teachers were matched to the case teach-

ers on the same selection criteria, but these teachers were not leaders in their use of parent involvement in learning activities at home. The case and control teachers and their principals were interviewed at length about instructional practices in general, and parent involvement practices and leadership. The parents of the children in the 82 teachers' classrooms were surveyed about their attitudes toward and experiences with parent involvement. In all, 1269 parents responded by mail to the survey -- a response rate of 59%. About 600 fifth-grade students were surveyed about their homework activities. The characteristics of the samples of case and control teachers, the students and their parents is documented in Becker and Epstein, 1982; Epstein, 1982, 1983.

This report uses data from parents and teachers in exploratory analyses of the correlates of homework activities and student achievements and behaviors in school. This spring, longitudinal data from students will be used in analyses of the effects of homework time and homework practices on achievement and behavioral gains of students in grades 1, 3, and 5.

Exploratory Analyses

With these perspectives on homework to guide the inquiry, we have begun to examine data from elementary school teachers, principals, students, and parents on homework policies, procedures, and effects. We are especially interested in how the two institutions -- home and school -- interact to build homework habits and to improve achievements and school-related behaviors. Table 1 presents six groups of variables that concern homework and shows their zero-order correlations with reading

and math achievements, homework performance, and classroom behavior. The six sets of variables and their scoring are:

Homework Time. Minutes spent per day is a 5-point score from no homework to one hour or more; minutes parent helps or could help per day is a 8-point score from no minutes to one hour or more.

Homework Quality. Appropriate amount and difficulty are 3-point scores from too easy to too difficult; too little to too much; appropriate purpose is a four-point score of parent disagreement that homework is just busywork (scored negatively).

Student Attitudes. These two items of parent recognition that the child likes to talk about school and homework, and that the child is tense about homework (scored negatively), are four-point scores from strongly agree to strongly disagree.

Teacher Practices. Parents' reported the frequency of use of twelve practices of parent involvement including reading, discussion, informal activities, formal contracts and signing homework, tutoring or drill and practice. Parents' reports that the teacher thinks parents should help, and reports that they receive many ideas from the teacher, are four-point scores from strongly agree to strongly disagree. Parents agreed or disagreed that the teacher talked to them directly

about their child's homework, need for parental help at home, or classroom behavior. Ratings by parents or principals on the overall quality of the teacher are six-point scores from poor to outstanding.

Parent Abilities and Resources. Parent education is a six-point score from less than high school to graduate school; confidence in ability is a four-point score from strongly agree to strongly disagree that they have enough training to help the child in reading and math. Educational items is a check list of ten items that students may use at home for homework including a ruler, dictionary, globe, and others. Number of books at home is a five-point score ranging from fewer than 10 to more than 100 books. Regular place for homework is a single item of agreement or disagreement.

Other Student and Family Factors. Sex of student is scored female=1, male=0; race, scored white=1, black=0; residence, scored 1=city, 0=suburb/rural; family structure is scored 1 or 2 for one or two parents home; 1 or 0 for mother works or does not work outside the home; hours of TV per day ranging from none to 5 or more hours; parent expectations for child's education is a four-point score from finish high school to finish graduate school; and grade level refers to the student's grade, 1, 3 or 5.

Homework Practices and Student Skills and Behaviors

Table 1

Homework Variables as Correlates of Student Achievements and Behaviors[a/][b/]

	Achievements		Behaviors			Mean/S.D.
	Reading	Math	Homework Star	Homework Problem	Discipline Problem	
I. Homework Time						
Minutes Spent	-.108	-.052	.081	.000	-.011	3.00/1.25
Minutes Parent Helps	-.180	-.195	-.010	.070	.134	26.32/15.40
Minutes Parents Could Help	-.042	-.077	.090	-.137	.045	43.84/17.34
II. Homework Quality						
Appropriate Amount	.019	-.033	-.075	.030	.041	2.16/0.53
Appropriate Difficulty	.032	.025	-.021	.012	.053	2.07/0.40
Appropriate Purpose	.047	.025	.045	.009	.012	3.61/0.72
III. Student Attitudes						
Likes to talk about school and homework	.131	.117	.140	-.132	-.124	3.35/0.93
Not tense about homework	.179	.141	.074	-.119	-.032	2.90/1.16
IV. Teacher Practices						
Frequent Requests for Parent Involvement	-.137	-.123	.054	.043	.020	3.95/3.36
Teacher Thinks Parents Should Help	-.187	-.172	-.025	.013	-.007	2.20/0.82
Parent Receives Ideas from Teacher	-.061	-.077	.063	.019	-.042	2.44/1.17
Teacher Talked to Parent About						
(a) Homework	-.087	-.137	-.070	.118	.012	0.18/0.38
(b) Parent Help at Home	-.132	-.110	.018	-.008	-.032	0.22/0.42
(c) Behavior	-.055	-.072	-.012	.061	.275	0.46/0.50
Parent Rating of Teacher Quality	.060	.093	.105	-.026	-.077	3.76/1.19
Principal Rating of Teacher Quality	.113	.093	-.044	-.085	.003	2.52/1.04
V. Parent Abilities and Resources						
Parent Education	.196	.238	.027	-.100	-.057	2.60/1.23
Confidence in Ability to Help	.140	.166	.085	-.073	-.034	3.12/1.11
Educational Items at Home	.238	.262	.071	-.105	-.136	4.67/2.53
Number of Books at Home	.161	.192	.060	-.095	-.078	3.97/1.20
Regular Place for Homework	-.043	-.056	-.053	.080	.019	1.09/0.29
VI. Other Student and Family Factors						
Sex (Female)	.093	.033	.129	-.075	-.201	1.50/0.50
Race (White)	.083	.155	-.015	-.005	-.064	0.64/0.48
Residence (City)	-.043	-.146	.008	-.018	.034	0.35/0.48
Two-Parent Home	.057	.142	.085	-.066	-.056	1.76/0.43
Mother Works	-.018	.021	.015	.027	-.019	0.61/0.49
Hours TV	-.053	-.082	.009	.003	.057	2.36/1.17
Parent Expectations for Student Education	.316	.308	.090	-.137	-.082	2.39/1.13
Grade Level	-.002	.045	.033	.036	-.015	2.89/1.70

a/ N = 1021 students whose parents participated in the survey for whom information on classroom achievements and behavior were provided by the teacher.

b/ Correlations of .08 or higher are significant at or beyond the .01 level.

Homework Time. Section I of the table shows how three measures of homework time correlate with student achievements and behaviors. The three measures are the average number of minutes spent by the child on homework per day; the average number of minutes the parent helps the child in response to teacher requests; and the number of minutes the parent could help if shown how to do so.

The time spent doing homework ranged from none (13%), to 15 minutes (21%), 30 minutes (36%), 45 minutes (13%) and one hour or more (17%). Parents helped on the average of 25 minutes per night when asked to do so by teachers, but said they could help about 45 minutes per night if the teacher showed them how to help.

The relationships between homework time or parent help on student achievements in reading and math are negative. That is, students who spend more time on homework and get more help from parents have lower achievement in reading and math than students who spend less time on homework. The relationship is especially strong between more minutes of parent help and lower achievement. These negative relationships indicate that teachers are reaching out to parents to obtain extra help for children who need additional learning time, or that parents are recognizing students' weaknesses and helping on their own. Children who are doing well in school spend less time and need less help from parents than do weaker students. Longitudinal analyses will tell whether this assistance "pays off" in terms of improved math and reading skills over one year.

Other analyses show that some teachers make high requests for parent assistance of all students' parents (Epstein, 1983). We will be interested in the effects on school achievements and behaviors of parent involvement in homework activities for low, average, and high achieving students who are in the classrooms of teachers who do and do not emphasize parent involvment activities.

The right side of the table in section I shows the associations of homework time and school-related behaviors. When children do more homework, their teachers consider more of them to be "homework stars." Parents of homework stars--not homework problems say they could spend more time assisting their children--probably because the parents of homework problems already spend more time assisting their children.

It seems counter-intuitive to say that the more time spent on homework, the lower the student achievement. This is a good example of the inadequacy of correlations to address questions of "effects" on students. The patterns reported here are indicative of some well-known facts about elementary school students. First, at the elementary school level, all students are likely to be assigned the same type of homework, if not the same homework activities. The same type of activity (learning 20 spelling words; completing 10 math problems) may take slow students longer than bright students to complete. Students who have problems learning in school need to spend more time on a homework activity in order to understand what other children mastered in class. Teachers may ask parents to see that the children finish their work, even if they do not ask the parents to help the child with needed skills. Thus, the

child will spend more time on homework and the parent will spend more time monitoring or helping if, for example, the parent is asked to sign each night's completed work.

We will use data from teachers on the average amount of homework they assign, to compare assigned or expected time with time spent by individual students. The real tests of homework time require longitudinal analyses that examine the changes in achievments or behaviors as a result of time spent for students at different ability levels.

The relationships at the elementary school level with homework time are important because they differ from relationships noted for secondary school students. The younger students and their families are still trying to be responsive to school demands for mastering basic skills and the children and their parents spend more time working on needed skills. Somewhere between the elementary and junior high school years, the philosophies of the schools, the students, and their parents change. Brighter students spend more time on homework and slower students and their parents stop working on mastering basic skills. The discrepancy suggests an important topic for new efforts at school improvement to continue to mobilize parent assistance for students who need the most help.

Homework Quality. Section II features three measures of parents' estimates of the appropriateness and value of the homework their children receive. There are no significant correlations of these measures with achievements or behaviors. One reason for this is the lack of variation in the parents' ratings. About 92% of the parents agreed that

homework was not busy work, 90% said that the child's work was the appropriate level of difficulty, and 78% thought the child received the right amount of homework.

Student Attitudes. Section III explores the relationships between two student attitudes toward homework and student achievement and behavior. Children who like to talk about school and homework with a parent and children who are not tense about working with the parent on home learning activities have higher reading and math skills and are more often considered homework "stars." Children who do not like to talk about school and homework are more apt to be homework and discipline problems.

In this sample, close to 20% of the elementary school students do not like to talk about school with their parents, and 35% get tense working with their parents on homework. These attitudes about school that are displayed at home may be early warning signals of more serious problems. Teachers may be able to help parents learn how to help their children to build confidence and positive attitudes about school and homework. Positive attitudes toward school are good indicators of day-to-day success in school, commitment to school goals, and the likelihood of staying in school (Epstein, 1981).

Teacher Practices. Section IV includes measures of teacher practices of parent involvement concerning homework that could be associated with student achievement and behavior. The correlations shown here support the information from Section I that parents spend more time with children who need more help, but these items document that more parent time is given in response to requests from teachers.

Parents say they receive more frequent requests, more messages that they should help, and more direct communciations from teachers about how to help at home when their children are low in reading and math skills. Principals and parents, however, tend to rate the teacher higher in overall teaching quality when the students are high in achievement. It will be important to use longitudinal data to determine if teachers are given high ratings by parents and principals when the children improve in achievements and school behavior.

The right hand columns in section IV show that teachers talk directly with parents about homework activities if the students are homework "problems" (r=.118) and talk directly with parents about school behavior of students who are classroom discipline problems (r=.275). These correlations suggest that teachers reach out to parents when they need help solving homework and discipline problems. Teacher practices of parent involvement are not as highly correlated with homework completion or discipline problems as they are with student achievements.

Parent Abilities and Resources. Section V examines five measures of parent abilities and resources that may aid student achievements and behaviors. Four measures are significantly and positively correlated with reading and math skills: parent education, confidence about ability to help in reading and math, educational items in the home, and books in the home. When these resources are lacking at home, the child is more likely to be a "homework problem." Having a regular place for homework is not highly associated with achievement or behavior. Others have also reported that a regular place for homework is not as important as a

regular habit of completion (McCutcheon, 1983). In these data, the lack of importance of the variable is probably due to the lack of variation in the responses, with about 91% of the families reporting that the children have a regular place for doing homework.

Other Student and Family Factors. Section VI shows the association of other family factors that are believed to affect homework activities, achievements and behaviors. There are strong correlations between race (white), location (non-city residence), and two-parents home with math (but not reading) skills. Parents' educational expectations for the child are associated with reading and math achievements and behavior.

Some family variables are less important might be expected from popular opinion. Hours of TV per day is not correlated with math or reading skills. There is no association of mother working outside the home with reading or math achievements, homework completion, or classroom behaviors. The patterns are not affected by grade level. Thus, there are high and low achieving students, and well- and poorly-behaved students at all grade levels, and in families in which mothers do and do not work outside the home.

We see the expected patterns that female students do better in reading skills and are more often labeled "homework star" whereas males are more often labeled "discipline problems." These associations make it clear that multivariate analyses are needed that take into account family socioecomic factors that affect achievements and behaviors so that the independent effects of homework can be identified.

Summary and Discussion

Overall, across the six groups of variables several intriguing patterns emerge.

Reading and math skills: Low achievement is associated with more time spent doing homework, more minutes of parent help, and more frequent requests from teachers for parent involvement in learning activities at home. The significant negative associations indicate that in the elementary school parents are asked to assist children who need more help. At this level of schooling, not much homework is assigned per night, and so if a student has some trouble with the work, he or she can work a little longer to complete the assignment. By the time students are in high school much more homework is given, and more is given to brighter students (Garner, 1978). Poor students in high school tend not to work long on what they do not understand, and typcially do not expect (and may not want) their parents' help. High school teachers do not ask parents to help. Our data, then, show facts about elementary school learning and raise new questions about the potential for parent involvement for helping students achieve at grade-level.

Homework and classroom behavior: Parents report spending more time helping children who teachers consider discipline and homework problems. The parents of other children say they could spend more time helping their children at home if they were shown how to do so. There is a supply of "untapped" parental assistance available to teachers, that may be especially useful in improving the skills of "average" students who could do better with additional time and attention. We will be looking

at the effect on students when teachers make parent involvement part of their regular teaching practice for parents of children of all abilities.

One important correlate of homework and discipline problems was the lack of "educational trappings" at home (books, rulers, globes, dictionaries, art supplies, etc.). Teachers who seek help from parents in solving homework and discipline problems of their students may need to make educational resources available for use at home.

Importance of attitudes: Children who like to talk about school and homework with their parents tend to be the students who are good students, homework stars, and well-behaved in class. Children who are tense when working with their parents on homework activities are more often "homework problems." Yet these are the children whose parents are asked by teachers to spend more minutes helping at home. Parents of children who have problems in school require guidance on how to help children, or else the school problems could be redoubled by ineffective teaching at home.

Homework is a manipulable variable. Teachers and administrators control whether to assign homework, and how much homework to assign. They develop the parameters that encourage or prevent parent involvement in the learning activities that students bring home. Our exploratory work indicates that a simple association of homework time (assigned or spent) and student achievement is not enough to understand when homework is important for effective teaching and learning. The "bottom line" con-

cerning homework is whether more time spent by children who need the most help "pays off" in the improvement or maintenance of school achievements, homework behaviors, and other school attitudes. A final paper from this project will use longitudinal data to examine "gain" or "change" scores in achievements and behaviors attributable to homework.

References

Austin, J. D. Home work research in mathematics. School Science and Mathematics, 1978, 78, 115-121.

Becker, H. J. and Epstein, J. L. Parent involvement: A study of teacher practices. The Elementary School Journal, 1982a, 83 (November), 85-102.

Becker, H. J. and Epstein, J. L. Influences on teachers' use of parent involvement. Report 324. Baltimore: The Johns Hopkins University Center for Social Organization of Schools, 1982b.

Coleman, J. S., Hoffer, T., and Kilgore, S. High school achievement. New York: Basic Books, 1982.

Epstein, J. L. Effects on parents of teacher practices of parent involvement. Report 346. Baltimore: The Johns Hopkins University Center for Social Organization of Schools, 1983b.

Epstein, J. L. School policy and parent involvement: Research results. Educational Horizons, 1984, 62, 70-72.

Epstein, J. L. and Becker, H. J. Teacher reported practices of parent involvement: Problems and possibilities. The Elementary School Journal, 1982, 83 (November) 103-113.

Epstein, J. L. Student reactions to teacher practices of parent involvement. Paper presented at the annual meeting of the American Educational Research Association, 1982.

Garner, W. T. Linking school resources to educational outcomes: The role of homework. Teachers College Research Bulletin, 1978, 19, 1-10.

Gray, R. F. and Allison, D. E. An experimental study of the relationship of homework to pupil success in computation with fractions. School Science and Mathematics, 1971, 71, 339-346.

Keith, T. Z. Time spent on homework and high school grades: A large-sample path analysis. Journal of Educational Psychology, 1982, 74, 248-253.

Keshock, E. G. The relative value of optional andmandatory homework. Teaching Method News, 1976, 8, 30-32.

Maertens, N. and Johnston, J. Effects of arithmetic homework on the attitudes and achievements of fourth, fifth, and sixth grade pupils. School Science and Mathematics, 1972, 72, 117-126.

McCutcheon, G. How does homework influence the curriculum? Paper presented at the annual meeting of the American Educational Research Association, 1983.

Rutter, M., Maughan, B., Mortimer, P., and Ouston, J. Fifteen thousand hours: Secondary schools and their effects on children. Cambridge, MA: Harvard University Press, 1979..

Wolf, R. M. Achievement in the United States. In H. J. Walberg, (ed.) Educational environments and effects. Berkeley: McCutchan, 1979.

Yeary, E. E. What about homework? Today's Education. September-October, 1978, 80-82.